REMARKS

The foregoing amendments and the following remarks are responsive to the February 8, 2006 Office Action. Claims 1, 2, 8, 11, and 12 have been amended, Claims 3-7, 9, and 10 remain as originally filed, and new Claims 13-18 are added. Therefore, Claims 1-18 are currently pending.

In response to the Office Action mailed February 8, 2006, Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments.

Comments On Allowable Subject Matter

Applicants note with appreciation that the Examiner has indicated that Claims 8-10 would be allowable if rewritten in independent form. Claim 8 has been amended to be in independent form. Claim 9 depends from Claim 8. Claim 10 depends from Claim 9. Accordingly, Applicants submit that Claims 8-10 are in condition for allowance.

Alexander Does Not Disclose the Detection System Recited By Claims 1-4 and 7

Claims 1-4 and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Alexander (U.S. Patent No. 5,847,825) ("Alexander"). Applicants respectfully traverse the present rejection. However, to expedite the prosecution of the present application, Applicants have amended Claims 1 and 2. Applicants also expressly reserve the right to further prosecute the original versions of Claims 1-4 and 7 through continuation practice.

Amended Claim 1 recites (emphasis added):

> 1. A detection system for use during drilling by irradiation of an interaction region of a structure with laser light, the structure comprising a first material and a reinforcing member embedded in the first material, the detection system comprising:
>
> a focusing lens positioned to **receive light emitted from the interaction region during drilling of the structure, the interaction region comprising a surface of the reinforcing member**;
>
> an optical fiber optically coupled to the focusing lens to receive light from the focusing lens; and
>
> a spectrometer optically coupled to the optical fiber to receive light from the optical fiber, the **spectrometer adapted for analysis of the light for indications of the reinforcing member within the interaction region**.

Applicants submit that Alexander does not disclose all the limitations of amended Claim 1. For example, Alexander does not disclose "a focusing lens positioned to receive light emitted from the interaction region during drilling of the structure, the interaction region comprising a surface of the reinforcing member" or "a spectrometer optically coupled to the optical fiber to receive light from the optical fiber, the spectrometer adapted for analysis of the light for indications of the reinforcing member within the interaction region." Therefore, Claim 1 is patentably distinguished over Alexander. Applicants respectfully request the Examiner withdraw the rejection of Claim 1, and pass this claim to allowance.

Claims 2-4 and 7 depend from Claim 1. Claims 2, 3, and 7 depends from Claim 1. Claim 4 depends from Claim 3. Accordingly, Applicants submit that Claims 2-4 and 7 also define over the cited references, not only because they depend from Claim 1, but also on their own merit. Therefore, Applicants respectfully request the Examiner withdraw the rejection of Claims 2-4 and 7 and pass these claims to allowance.

Theriault Does Not Disclose the Detection System Recited By Claims 1 and 6

Claims 1 and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Theriault *et al.* (U.S. Patent No. 6,147,754) ("Theriault"). Applicants respectfully traverse the present rejection. However, to expedite the prosecution of the present application, Applicants have amended Claim 1. Applicants expressly reserve the right to further prosecute the original version of Claims 1 and 6 through continuation practice.

Applicants submit that Theriault does not disclose all the limitations of amended Claim 1. For example, Theriault does not disclose "a focusing lens positioned to receive light emitted from the interaction region during drilling of the structure, the interaction region comprising a surface of the reinforcing member" or "a spectrometer optically coupled to the optical fiber to receive light from the optical fiber, the spectrometer adapted for analysis of the light for indications of the reinforcing member within the interaction region." Thus, Claim 1 is patentably distinguished over Theriault. Accordingly, Applicants respectfully request the Examiner withdraw the rejection of this claim and pass Claim 1 to allowance.

Claim 6 depends from Claim 1. Applicants submit that Claim 6 is patentably distinguished over the prior art not only because it depends from Claim 1, but also on its own

merit. Accordingly, Applicants respectfully request the Examiner withdraw the rejection of Claim 6 and pass this claim to allowance.

Satoru Does Not Disclose the Detection System of Claim 11

Claim 11 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Satoru (Japanese Patent Publication No. 2002-296183) ("Satoru"). Applicants respectfully traverse the present rejection. However, to expedite the prosecution of the present application, Applicants have amended Claim 11. Applicants expressly reserve the right to prosecute the original version of Claim 11 through continuation practice.

Amended Claim 11 recites (emphasis added):

> 11. A detection system for use during drilling by irradiation of an interaction region of a structure with laser light, the structure comprising a first material and a reinforcing member embedded in the first material, the detection system comprising:
>
> means for **focusing light emitted from the interaction region during drilling of the structure, the interaction region comprising a surface of the reinforcing member**;
>
> means for separating the focused light into a spectrum of wavelengths; and
>
> means for **analyzing at least a portion of the spectrum for indications of the reinforcing member within the interaction region.**

Applicants submit that Satoru does not disclose all the limitations of amended Claim 11. For example, Satoru does not disclose "means for focusing light emitted from the interaction region during drilling of the structure, the interaction region comprising a surface of the reinforcing member" or "means for analyzing at least a portion of the spectrum for indications of the reinforcing member within the interaction region." Thus, Claim 11 is patentably distinguished over Satoru. Accordingly, Applicants respectfully request the Examiner withdraw the rejection of this claim and pass Claim 11 to allowance.

Satoru Does Not Disclose the Method of Claim 12

Claim 12 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Satoru. Applicants respectfully traverse the present rejection. However, to expedite the prosecution of the present application, Applicants have amended Claim 12. Applicants expressly reserve the right to further prosecute the original version of Claim 12 through continuation practice.

Amended Claim 12 recites (emphasis added):

12. A method of detecting a reinforcing member within a laser-irradiated interaction region of a structure comprising a first material and the reinforcing member embedded in the first material, the method comprising:

focusing light from the interaction region during drilling by laser irradiation of the structure, the interaction region comprising a surface of the reinforcing member;

separating the light into a spectrum of wavelengths; and

analyzing at least a portion of the spectrum for indications of the reinforcing member within the interaction region.

Applicants submit that Satoru does not disclose all the limitations of amended Claim 12. For example, Satoru does not disclose "focusing light from the interaction region during drilling by laser irradiation of the structure, the interaction region comprising a surface of the reinforcing member" or "analyzing at least a portion of the spectrum for indications of the reinforcing member within the interaction region." Thus, Claim 12 is patentably distinguished over Satoru. Accordingly, Applicants respectfully request the Examiner withdraw the rejection of this claim and pass Claim 12 to allowance.

The Combination of Alexander and Jacobowitz Does Not Make Claim 5 Obvious

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being obvious over Alexander in view of Jacobowitz *et al.* (U.S. Patent No. 4,060,327) ("Jacobowitz"). Applicants respectfully traverse the present rejection.

As discussed above, Alexander does not disclose or suggest all the limitations of amended Claim 1. Jacobowitz does not disclose or suggest the limitations of amended Claim 1 that are missing from Alexander. Therefore, amended Claim 1 is patentable distinguished over the combination of Alexander and Jacobowitz.

Claim 5 depends from Claim 1. Accordingly, Claim 5 is patently distinguishable over the combination of Alexander and Jacobowitz, not only because it depends from Claim 1, but also on its own merit. Therefore, Applicants respectfully request the Examiner withdraw the rejection of Claim 5 and pass this claim to allowance.

SUMMARY

For at least the reasons described above, Applicants respectfully request the Examiner pass Claims 1-18 to allowance.

The undersigned has made a good faith effort to respond to all of the rejections and objections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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